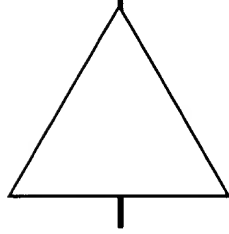
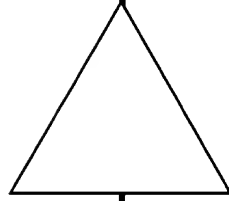


Ciena Configuration Attachment 1

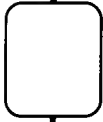
Stage 1



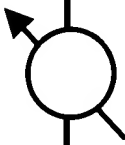
Stage 2



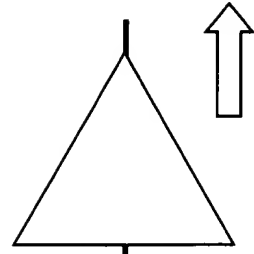
Gain
Flattening
Filter



Stage 3



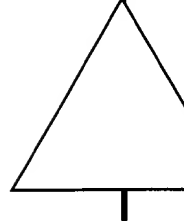
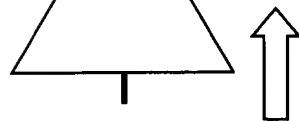
Variable Optical
attenuator



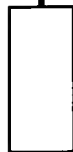
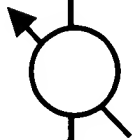
Kinoshita Configuration

Attachment 1 (cont)

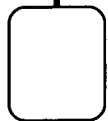
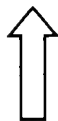
Stage 1



Variable Optical
attenuator

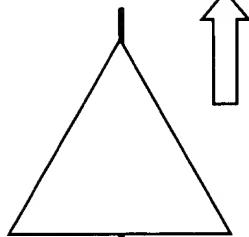


Stage 2



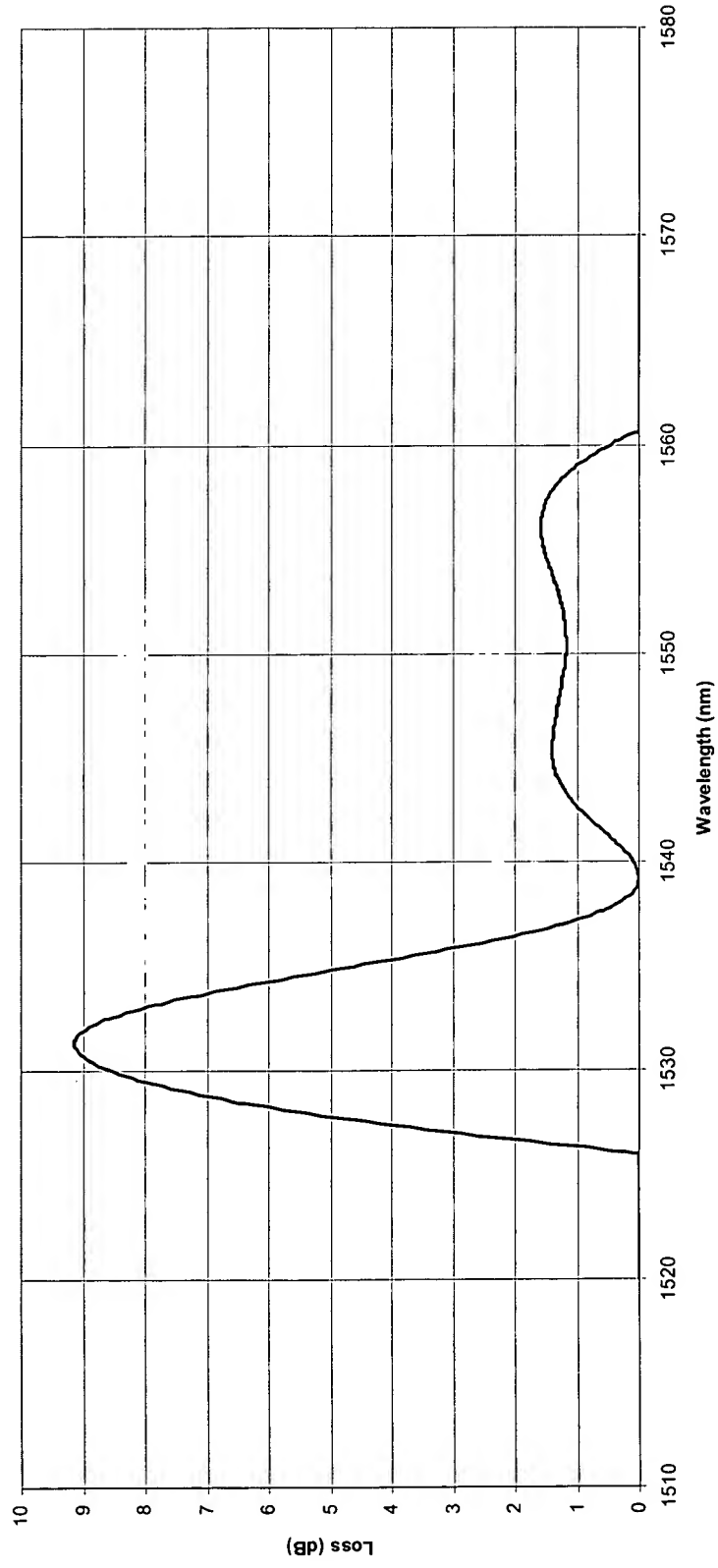
Gain
Flattening
Filter

Stage 3



Gain Flattening Filter (for both cases) Attachment 1 (cont)

GFF Loss (dB) for 1535.8nm~1560.6nm



Noise performance of two configurations

Attachment 1 (cont)

NF comparison

